

## GOLF SIMULATION

This draws a golf course in graphics mode with endless variations on bunkers, water hazards and roughs, and allows the player to actually 'play' the shots giving a choice of club, hitting strength and direction.

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40 REM GOLF SIMULATION
50 REM BY GARY J MCCLARY
51 REM DEC. 1983
100 CLS
110 PRINT#33, "WELCOME TO GLENLAY GOLF CO
URSE"
111 PRINT
112 PRINT "IN GOLF THE OBJECT OF THE GAME
"
113 PRINT "IS TO HIT THE BALL FROM THE"
114 PRINT "TEE TO THE HOLE IN THE"
115 PRINT "FEWEST NUMBER OF SHOTS."
120 PRINT
125 PRINT "WILL THERE BE 1 OR 2 PLAYERS?"
130 K=INKEY#
133 I=INKEY#;W=RND(DO);DO=DO+1;IFDO=10
THEN DO=1;IF I=0 THEN I=13
135 IF I=0 THEN I=1;LP=0;GOTO145
137 IF I=2 THEN I=2;LP=0;GOTO145
140 GOTO130
145 CLS
155 PRINT "YOUR GOLF BAG CONTAINS A:"
156 PRINT
160 PRINT "WOOD MAX. RANGE 251 METRES"
165 PRINT "IRON MAX. RANGE 221 METRES"
170 PRINT "IRON MAX. RANGE 184 METRES"
175 PRINT "IRON MAX. RANGE 127 METRES"
180 PRINT "WEDGE MAX. RANGE 87 METRES"
185 PRINT "PUTTER MAX. RANGE 41 METRES"
190 PRINT "AND IS ONLY USED ON THE GREEN"
194 PRINT
195 PRINT "TO ACHIEVE GREATER HEIGHT"
200 PRINT "USE A HIGH NUMBERED IRON"
205 PRINT
210 PRINT "SPACE CONTINUES THE GAME"
250 GOSUB20000
300 H0=1;T1=0;T2=0;GF=0
350 PA=RND(3)+2
351 PZ=RND(2)
352 IF PA=3 THEN P=3;SX=0;GOTO400
354 IF PA=4 THEN P=4,8
360 IF PA=5 THEN P=6,5
368 IF P=1 THEN SX=0
370 IF P=2 THEN SX=119
400 REM
420 ZB=RND(3);ZW=RND(3);ZJ=RND(3)
430 J3=RND(9)+2
450 A=RND(107)+7;BB=RND(7)+10
453 B=RND(5)+2;B=RND(9)+2;W=RND(10)+3
455 IF J3=1 THEN J3=0
456 IF ZB=1 THEN B=0
457 IF ZW=1 THEN W=0
458 C=RND(103)+9;D=13+RND(6)
459 MD=INT(SQR((A-SX)^2+(BB-B3)^2)*P)
460 HB=SQR((A-C)^2+(BB-D)^2)
465 IF HB=(G+B+3) THEN M450
466 E=13+RND(100);F=14+RND(35)
468 BW=SQR((C-E)^2+(D-F)^2)
470 W=SQR((A-E)^2+(BB-F)^2)
472 IF BW=(B+W+3) THEN M400
474 IF W=(W+B+3) THEN M400
480 J1=RND(103)+9;J2=RND(6)+13
485 HJ=SQR((A-J1)^2+(BB-J2)^2)
490 IF HJ=(G+J3+3) THEN M450
492 JW=SQR((J1-E)^2+(J2-F)^2)
494 IF JW=(J3+W+3) THEN M400
500 CLS
500 X=SX;Y=B3;R1=0;B1=0;W1=0
507 SC=0
509 CLS
510 PRINT "THIS IS HOLE NUMBER" MD
511 PRINT
512 PRINT "PLAYER" LP+1
513 PRINT
514 PRINT "PAR" PA; MD "METRES"

515 SC=0;X=SX;Y=B3;R1=0;B1=0;W1=0
517 GOSUB20000
522 GOSUB20000
523 GOSUB20000
524 CLS
525 PRINT "WHICH CLUB DO YOU WISH TO USE"
527 INPUT CL
530 IF CL=1 THEN AU=29+RND(11);GOTO000
540 IF CL=2 THEN AU=19+RND(11);GOTO000
550 IF CL=3 THEN AU=9+RND(6);GOTO000
560 IF CL=4 THEN AU=7+RND(6);GOTO000
570 IF CL=5 THEN AU=7+RND(6);GOTO000
580 CLS:PRINT "YOU DO NOT HAVE ONE OF THO
SE":GOTO525
600 CLS
602 PRINT "IN WHICH DIRECTION DO YOU WISH
"
610 PRINT "TO HIT? (0 TO 360 DEGREES)"
620 PRINT "MEASURED ANTICLOCKWISE FROM"
630 PRINT "THE RIGHT"
635 GOSUB00000
640 INPUT AZ
645 CLS
650 PRINT "HOW HARD DO YOU WISH TO HIT"
660 INPUT "0 TO 50" IU
665 CLS
668 PS=3.141592654/100
670 IF U<0 THEN U=0
675 IF U>50 THEN U=50
677 SC=SC+1
680 RA=U*SIN(2*AU*PS)/9.81
682 RS=RA/P
685 HT=((SIN(AU*PS)*U)^2)/(19.62)
686 IFR1=1 THEN I2000
687 IF B1=1 THEN I3000
690 X=X+RS*COS(AZ*PS)
695 Y=Y-RS*SIN(AZ*PS)
710 H=INT(X);K=INT(Y)
715 H1=0
720 IF H<0 THEN H=0;H1=1
725 IF H>127 THEN H=120;H1=1
730 IF K<0 THEN K=0;H1=1
735 IF K>83 THEN K=83;H1=0
736 X=H;Y=K
740 IF H1=1 THEN S000
742 DI=SQR((A-H)^2+(BB-K)^2)
745 REM
746 IF DI<GANDGF=1 THEN 790
747 GOSUB20000
754 COLOR2
755 K=INKEY#
760 I=INKEY#
765 SET(H,K):SET(H+1,K)
770 RESET(H,K):RESET(H+1,K)
775 IF I=0 THEN 700
780 IF I<0 THEN 700
790 DI=SQR((A-H)^2+(BB-K)^2)
792 DB=SQR((C-H)^2+(D-K)^2)
794 DW=SQR((E-H)^2+(F-K)^2)
796 DJ=SQR((J1-H)^2+(J2-K)^2)
800 DM=DI*P
810 IF DI<G THEN GF=1;GOTO0000
812 IF DB<BANDK=0 THEN 7000
813 IF DJ<J3ANDJ3=0 THEN 7000
814 IF DW<WANDW=0 THEN 10000
816 CLS
817 PRINT "THAT SHOT WENT "INT(RA)"METRES
"
819 PRINT
820 PRINT "DISTANCE FROM THE HOLE"
822 PRINTINT(DM)"METRES"
825 PRINT "NUMBER OF STROKES"="SC
827 IF PA=4ORPA=5 THEN I000
830 IF H<40ANDK=31 THEN I000
835 IF H<80ANDK=31 THEN I000
840 IF K<8 THEN I1000
845 GOTO2000
1000 IF P=2 THEN I500
1100 IF H<10ANDK=31 THEN I1000
1110 IF K<8 THEN I1000
1120 GOTO2000
1500 IF H<111ANDK=31 THEN I1000
1510 IF K<8 THEN I1000
1520 GOTO2000
2000 GOTO525
7000 B1=1
7005 BH=124.5
7010 PRINT "YOU ARE IN THE BUNKER"
7020 PRINT "YOU ARE ADVISED TO USE THE ME
DGE"
7030 GOTO525
8000 GF=1;GOTO00000
8004 CLS
8008 PRINT "YOU ARE ON THE GREEN AND WILL
"
8010 PRINT "BE USING THE PUTTER"
8020 PRINT "WHICH DIRECTION (0 TO 360)"
8025 GOSUB00000
8030 INPUT AZ
8035 CLS
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0040 PRINT "HOW HARD DO YOU WANT TO HIT"
0050 INPUT "(0 TO 25)";U
0060 IF U<0 THEN U=0
0065 IF U>25 THEN U=25
0070 AU=70
0075 CLS
0200 GOTO 0677
9000 SOUND 4,2:SC=SC+1:GOTO 745
10000 W1=0
10005 SC=SC+1
10010 H=H+28W1:K=K+28W1
10020 GOTO 00000
11000 R1=1
11005 RH=111+RND(15)
11010 PRINT
11011 PRINT "YOU ARE IN THE (ROUGH)"
11012 IF RH>123 THEN B0="TALL TREES":GOTO 11
018
11014 IF RH>118 THEN B0="MEDIUM TREES":GOTO
11018
11016 IF RH>112 THEN B0="LOW SCRUB":GOTO 11
018
11018 PRINT "YOUR NEXT SHOT MUST CLEAR SO
ME"
11019 PRINT B0
11020 PRINT
11030 GOTO 0525
12000 IF HT(RH THEN RA=RND(8):GOTO 12100
12010 RA=RA/2
12100 R1=0:GOTO 0082
13000 IF HT(BH THEN RA=0:GOTO 13100
13010 RA=RA/2
13100 B1=0:GOTO 0082
15000 SOUND 20,1:SOUND 15,1
15002 IF L=0 THEN T1=T1+SC:TT=T1:P1=P1+SC-
PA:Q=P1
15003 IF L=1 THEN T2=T2+SC:TT=T2:P2=P2+SC-
PA:Q=P2
15005 A0=" FOR THIS HOLE"
15006 CLS
15010 PRINT 039, "CONGRATULATIONS"
15015 PRINT 073, "PLAYER" LP+1
15020 PRINT
15030 PRINT "YOU ARE IN THE HOLE"
15040 PRINT "FOR "SC" SHOTS"
15060 IF SC=PA-2 THEN PRINT "EAGLE";A0
15062 IF SC=PA-1 THEN PRINT "BIRDIE";A0
15064 IF SC=PA THEN PRINT "PAR";A0
15066 IF SC=PA+1 THEN PRINT "BOGEY";A0
15068 IF SC=PA+2 THEN PRINT "DOUBLE BOGEY";A
0
15069 IF SC=1 THEN PRINT "HOLE IN ONE!!!":GO
TO 15072
15070 PRINT
15072 PRINT "YOUR TOTAL SO FAR IS" TT
15074 IF Q=0 THEN PRINT "YOU ARE ON PAR FOR
THE COURSE"
15076 IF Q>0 THEN PRINT "YOU ARE "Q" OVER PA
R FOR THE COURSE"
15078 IF Q<0 THEN Q=ABS(Q):PRINT "YOUR TOTAL
IS "Q" UNDER PAR"
15080 PRINT:PRINT
16000 PRINT "PRESS THE (SPACE)"
16010 K0=INKEY#
16020 J0=INKEY#:KD=RND(DD)
16030 DD=DD+1:IF DD>100 THEN DD=1
16040 IF J0=" THEN 16020
16050 IF J0<>" THEN 16020
16060 CLS
16100 IF L=1 THEN HO=HO+1:GOTO 0350
16200 IF L=2 AND L=1 THEN LP=B:HO=HO+1:GOTO
350
16210 IF L=2 AND L=0 THEN LP=1:GOTO 0510
20000 COLOR 4
20001 MODE(1):GF=0
20002 IF PA=40 OR PA=5 THEN 20112
20005 FOR I=0 TO 127 STEP 2
20010 SET(I,0):SET(RND(126),RND(7))
20020 NEXT
20030 FOR J=0 TO 40 STEP 2
20040 SET(1,31):SET(RND(40),31+RND(31))
20050 NEXT

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20060 FOR I=0 TO 127 STEP 2
20070 SET(1,31):SET(RND(40)+06,31+RND(31
))
20080 NEXT
20090 FOR I=31 TO 63 STEP 2
20100 SET(40,1):SET(06,1)
20110 NEXT
20111 GOTO 20200
20112 IF P2=2 THEN 20140
20115 FOR I=0 TO 127 STEP 2
20119 SET(1,0):SET(RND(126),RND(7))
20120 NEXT
20122 FOR I=18 TO 127 STEP 2
20124 SET(1,31):SET(RND(110)+16,31+RND(3
1))
20126 NEXT
20128 FOR I=31 TO 63 STEP 2
20130 SET(16,1)
20132 NEXT
20134 GOTO 20200
20140 FOR I=0 TO 127 STEP 2
20142 SET(1,0):SET(RND(126),RND(7))
20144 NEXT
20150 FOR I=0 TO 111 STEP 2
20152 SET(1,31):SET(RND(110),RND(31)+31)
20154 NEXT
20156 FOR I=31 TO 63 STEP 2
20158 SET(111,1)
20160 NEXT
20162 GOTO 20200
20200 FOR J=A-G TO A+G
20210 FOR J=B-B TO B+B-G
20220 SET(1,J)
20225 NEXT:NEXT
20226 COLOR 2
20228 FOR I=BB-11 TO BB:RESET(A,1):NEXT
20232 FOR I=BB-11 TO BB:SET(A,1):NEXT
20233 FOR J=BB-11 TO BB-B
20234 FOR I=A TO A+4

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20235 SET(1,J):NEXT:NEXT
20236 IF ZB=1 THEN 20265
20238 COLOR 2
20240 FOR I=C-B TO C+B STEP 2
20250 FOR J=D-B TO D+B STEP 2
20260 SET(1,J)
20264 NEXT:NEXT
20265 IF ZJ=1 THEN 20273
20266 COLOR 2
20267 FOR J=J1-J3 TO J1+J3 STEP 2
20268 FOR J=J2-J3 TO J2+J3 STEP 2
20269 SET(1,J)
20270 NEXT:NEXT
20273 IF ZW=1 THEN 20349
20275 COLOR 3
20280 FOR I=E-W TO E+W STEP 2
20290 FOR J=F-W TO F+W STEP 2
20300 SET(1,J)
20310 NEXT:NEXT
20349 COLOR 4
20350 FOR I=SK-21 TO SK+2
20360 SET(1,00)
20365 NEXT
20370 FOR I=0 TO 63
20380 SET(SK,1)
20385 NEXT
20390 RETURN
20390 K0=INKEY#
20392 J0=INKEY#:IF J0=" THEN 20392
20394 IF J0<>" THEN 20392
20399 RETURN
00000 CLS
00010 PRINT "YOU WERE IN THE (WATER) AND HA
VE"
00020 PRINT "BEEN REPOSITIONED FURTHER BA
CK"
00030 PRINT "WITH A PENALTY OF 1"
00040 FOR I=1 TO 3000:NEXT
00050 GOTO 715
00060 MODE(1)

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00070 GS=INT(47/(2*G))
00080 H0=2*(H-A):GS+03
00090 K0=(K-BB):GS+31
00093 COLOR 4
00095 FOR I=12 TO 100 STEP 2
00100 SET(1,0):SET(1,55)
00110 NEXT
00120 FOR I=0 TO 55 STEP 2
00130 SET(12,1):SET(106,1)
00140 NEXT
00145 COLOR 2
00150 FOR I=12 TO 31
00160 SET(63,1)
00165 NEXT
00170 FOR I=63 TO 75
00180 FOR J=12 TO 18
00190 SET(1,J)
00200 NEXT:NEXT
00210 FOR I=63-GS TO 63+GS
00220 FOR J=31-GS/2 TO 31+GS/2
00230 SET(1,J)
00240 NEXT:NEXT
00243 COLOR 4
00245 K0=INKEY#
00246 J0=INKEY#
00250 SET(HH,KK):SET(HH+1,KK)
00270 IF J0=" THEN 00246
00280 IF J0<>" THEN 00246
00285 IF D1<=.5 THEN 15000
00290 GOTO 0004
00300 PRINT 0176, "90"
00310 PRINT 0208, "."
00312 PRINT 0240, "."
00314 PRINT 0272, "."
00320 PRINT 0297, "180... (BALL) ... 0"
00330 PRINT 0336, "."
00332 PRINT 0368, "."
00334 PRINT 0400, "."
00340 PRINT 0432, "270"
00360 RETURN

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## Golf Simulation

From "Bumper Book of Programs."

by Y.C. 1985

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